SUPPORTING INFORMATION

Reversible Tuning of Wettability of Carbon Nanotube Arrays: The Effect of UV/ozone and Vacuum Pyrolysis Treatments

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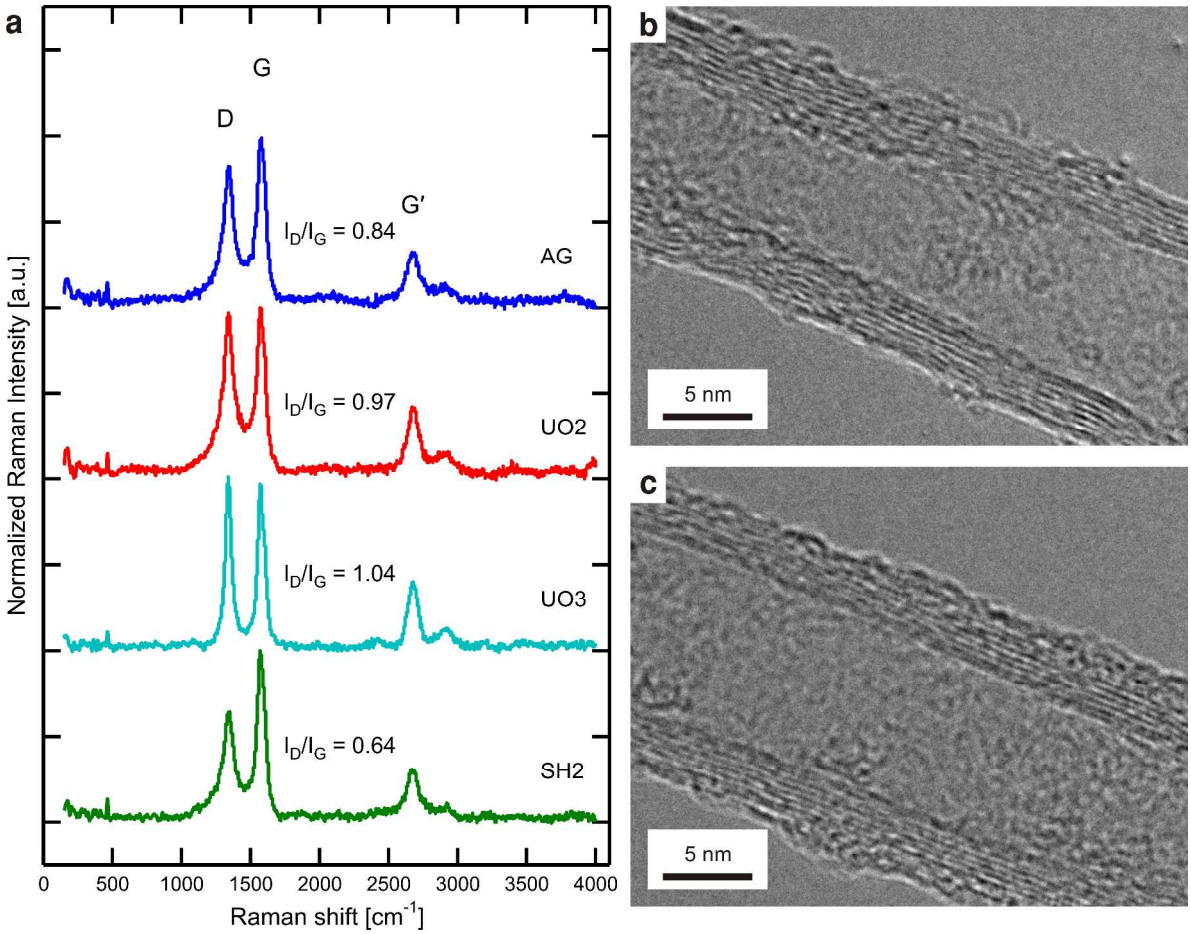
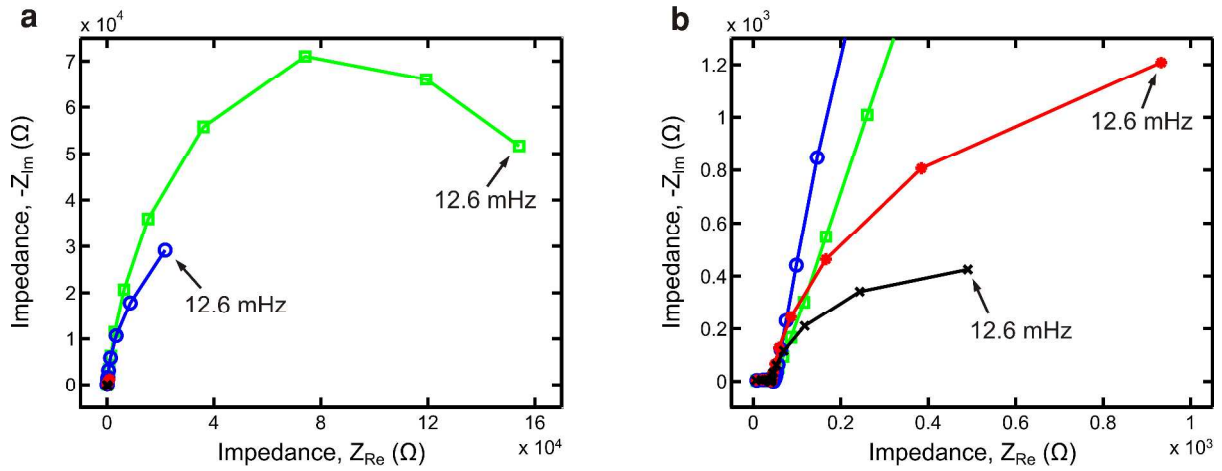


SI 1. (a) Typical Raman spectroscopy spectra of MWNT arrays with various degree of oxidation, showing distinguishable D, G and G' peaks at 1340 cm^{-1}, 1580 cm^{-1}, and 2670 cm^{-1}. The peak intensity ratio of I_D/I_G increases as the arrays undergo a longer UV/ozone treatment and increases after being exposed to the vacuum/pyrolysis treatment. Transmission electron microscopy (TEM) images of MWNT from (b) SH1 and (c) UO3 arrays. These images show that their graphitic structures are still intact after UV/ozone and vacuum pyrolysis treatments.



SI 2. (a) Nyquist impedance plot of MWNT arrays with various wetting properties in 1M NaCl aqueous electrolyte. AG, UO2, UO3, and SH2 arrays are indicated by open circle (blue), closed circle (red), cross (black) and rectangle (green) markers respectively. (b) Detailed plot of (a) to show clearly the impedance of UO2 and UO3 arrays.